This report is required by law (7 USC 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 215

See attached form for additional information.

Interagency Report Control No. 0215

11-21-05

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY

(TYPE OR PRINT)

1. CERTIFICATE NUMBER: 87-R-0002

CUSTOMER NUMBER: 2

FORM APPROVED
OMB NO. 0579-0036

"A" by D. WATKINS 12/15/05

Utah State University
Vp For Research/14500 Old Main Hill
Logan, UT 84322

Telephone: (435) -797-1180

COPY FOR YOUR INFORMATION

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, or experimentation, or held for these purposes. Attach additional sheets if necessary)

FACILITY LOCATIONS (Sites) - See Atached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY **(Attach additional sheets if necessary or use APHIS Form 7023A)**

A. Animals Covered By The Animal Welfare Regulations	B. Number of animal being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not ye used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use o pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals an for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for wh the use of appropriate anesthetic, analgesic, or tranquiliz drugs would have adversely affected the procedures, res or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasc such drugs were not used must be attached to this repor	F. TOTAL NUMBER OF ANIMALS (COLUMNS C + D + E)
4. Dogs	–	–	–	–	–
5. Cats	–	–	–	–	–
6. Guinea Pigs	2	–	–	–	–
7. Hamsters	–	1677	829	334	2840
8. Rabbits	–	–	–	–	–
9. Non-human Primates	–	–	–	–	–
10. Sheep	–	–	–	–	–
11. Pigs	–	–	–	–	–
12. Other Farm Animals	–	–	–	–	–
13. Other Animals					
Chinchillas	10	–	18	–	18

ASSURANCE STATEMENTS

1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anestetic, analgesic, and tranquilizing drugs, prior to, during, and following actual rese teaching, testing, surgery, or experimentation were followed by this research facility.

2) Each principal investigator has considered alternatives to painful procedures.

3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and app Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC-approved exceptions, this summary in brief explanation of the exceptions, as well as the species and number of animals affected.

4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer or Legally Responsible Institutional Official)

SI	NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL *(Type or Print)*	DATE SIGNED
(b)(6),(b)(7)(c)	(b)(6),(b)(7)(c)	11/9/05

API (AUG 91) ...hich is obsolete.)

NOV 18 2005

This report is required by law (7 USC 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

See reverse side for additional information.

Interagency Report Control No. 0180-DOA-AN

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.

FORM APPROVED
OMB NO. 0579-0036

CONTINUATION SHEET FOR ANNUAL REPORT OF RESEARCH FACILITY

(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY *(Name and Address, as registered with USDA, include Zip Code)*

COPY FOR YOUR INFORMATION

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY *(Attach additional sheets if necessary or use this form.)*

A. Animals Covered By The Animal Welfare Regulations — 12. &/OR 13. Other *(List by species)*	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. *(An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report).*	F. TOTAL NO. OF ANIMALS (Cols. C + D + E)
* Deer Mouse		192			192
* Kangaroo Rat		22			22
* Cottontail Rabbit		3			3
* Bats		139			139
* Cougar		31			31
* Pocket Mouse		18			18
* Chipmunnk		3			3
* Jackrabbit		1			1
* Woodrat		1			1
* Mule Deer		21			21
* Raccoons		42			42
* Used in Field Studies					

ASSURANCE STATEMENTS

1). Professionally acceptable standards governing the care, treatment, and use of animals, including approriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.

2). Each principal investigator has considered alternatives to painful procedures.

3). This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.

4). The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL
(Chief Executive Officer or Legally Responsible Institutional Official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL	NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL *(Type or Print)*	DATE SIGNED
(b)(6),(b)(7)(c)	(b)(6),(b)(7)(c)	11/9/05

(AUG 91)

NOV 18 2005

PART 1 - HEADQUARTERS

Column E Explanation

This form is intended as an aid to completing the Column E explanation. It is not an official form and its use is voluntary. Names, addresses, protocols, veterinary care programs, and the like, are not required as part of an explanation. A Column E explanation must be written so as to be understood by lay persons as well as scientists.

1. Registration Number: 87-R-002

2. Number 334 of animals used in this study.

3. Species (common name) Hamster of animals used in the study.

4. Explain the procedure producing pain and/or distress.
   see attachment

5. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results. (For Federally mandated testing, see Item 6 below)

   see attachment

6. What, if any, federal regulations require this procedure? Cite the agency, the code of Federal Regulations (CFR) title number and the specific section number (e.g., APHIS, 9 CFR 113.102):

   Agency _____ CFR _____

The purpose of preliminary virus titration studies is to identify the minimum viral dose required to produce mortality in approximately 90% of the animals inoculated. Titration experiments are only necessary when evaluating new virus stocks or new virus strains, and as such are performed infrequently. Titration experiments are vital to properly establish the animal model, and the information gained from the titration studies is used to determine the dose of virus used in subsequent antiviral experiments. The viruses being studied are often surrogates for exotic agents with potential bioterror concerns. As such, little is known regarding treatment, means to alleviate pain and distress, and any possible interaction between the virus and pain relieving substances. Attempts to alleviate pain or distress in animals involved in virus titration experiments have the potential to alter the outcome of the infection, and thereby provide inaccurate data for the planning of future experiments.

A literature search on PubMed identified several published reports where commonly used pain medications such as opioids(Chuang et al. 2005; Davies et al. 2005; Mahajan et al. 2005) and non-steroidal anti-inflammatory agents(Chen et al. 2000; Gaylis 2003) altered virus infections.

The antiviral experiments conducted often involve the use of experimental therapeutic agents. Due to the novel and experimental nature of the compounds involved little if any information is know regarding their toxicity profile. Dose range-finding experiments using small numbers of animals are conducted to identify the maximum tolerable dose and appropriate route of administration. This ensures that animals treated with experimental compounds in subsequent antiviral experiments are not treated with an overtly toxic dose. Additionally, the experimental status of the agents being tested means that little or no information is available regarding possible drug-drug interactions. Co-administration of pain relieving compounds could alter their antiviral activity or could enhance drug toxicity. Therefore, the use of pain relieving substances is avoided in these experiments.

Chen, N., J. L. Warner, et al. (2000). "NSAID treatment suppresses VSV propagation in mouse CNS." Virology **276**(1): 44-51.
Chuang, R. Y., S. Suzuki, et al. (2005). "Opioids and the progression of simian AIDS." Front Biosci **10**: 1666-77.
Davies, P. W., M. C. Vallejo, et al. (2005). "Oral herpes simplex reactivation after intrathecal morphine: a prospective randomized trial in an obstetric population." Anesth Analg **100**(5): 1472-6, table of contents.
Gaylis, N. (2003). "Infliximab in the treatment of an HIV positive patient with Reiter's syndrome." J Rheumatol **30**(2): 407-11.
Mahajan, S. D., R. Aalinkeel, et al. (2005). "Morphine exacerbates HIV-1 viral protein gp120 induced modulation of chemokine gene expression in U373 astrocytoma cells." Curr HIV Res **3**(3): 277-88.

Current Exceptions Approved by the IACUC

Date	PI	#	Protocol Title
12/03	(b)(6),(b)(7)(c)	1079	Surgery on Hamsters in BSL-3 Suite (Not a Dedicated Area)